

REMARKS

I. Status of the Application

Claims 1-28 are pending in this application and claims 29-55 have been previously withdrawn. In the January 25, 2008 office action, the Examiner:

A. Rejected claims 1-3, 5-17 and 19-28 under 35 U.S.C. § 103(a) as being unpatentable over U. S. Patent Number 7,017,146 to Dellarocas et al. (hereinafter “Dellarocas”) in view of U. S. Patent Number 6,141,595 to Gloudeman et al. (hereinafter “Gloudeman”);

B. Rejected claims 4 and 18 under 35 U.S.C. §103(a) as being unpatentable over Dellaorocas in view of Gloudeman, and further in view of U. S. Pub 2003/0229652 to Bakalash et al (hereinafter “Bakalash”).

II. Response to Office Action

In this response, Applicant has amended claims 1, 5-7, 9-13, and 15 and responds with arguments as presented below.

The Section 103 Ground of Rejection Should Be Withdrawn Because Gloudeman Does Not Teach Or Otherwise Disclose A Data Provider Interface As Required By The Pending Claims

Claim 1 requires:

a data provider interface configured to convert database instructions conforming to a common database access method to database queries conforming to a database application programming interface (API) and to convert database responses to the common database access method.

The Examiner asserts that Gloudeman at col. 5, lines 1-48 “teaches a data provider interface for converting between a common database access method and a database application programming interface (API)”. *Office Action of January 25, 2008*, p. 4, lines 4-6. Applicant respectfully

disagrees. While Applicant maintains that Gloudeman shows no component that converts between a common database access method and a database API, Applicant has amended claim 1 to more particularly set forth the configuration of the data provider to clarify the differences between the data provider of claim 1 and the cited Gloudeman reference. Specifically, the amended claim 1 requires the conversion of database instructions from a common database access method and the conversion of database responses to the common database access method. Because Gloudeman fails to teach these limitations, claim 1 is patentable.

As recited in claim 1, the data provider interface converts database instructions conforming to a common database access method to database queries conforming to a database API. As depicted in FIG. 1A, this element is interposed between application programs 30a ... 30n and the database 18. The data provider services 20 that comprise the data provider are also shown in FIG. 2A as providing bi-directional communication between the databases in database 18 and the applications in the solutions 14. In this intermediary role, the data provider interface converts instructions that conform to a common database access method to database queries that conform to an API for a database in database 18. This conversion enables all of the applications to be written with common database instructions so the building system designer can focus on the design of building system solutions and not on the intricacies of an interface to a database from which data is to be drawn. Likewise, the responses received by the data provider interface from a database API are converted to database responses that conform to the common database access method so the designer can use the responsive data without having to be knowledgeable about the various forms in which a database API returns data.

The Gloudeman reference discloses no structure for performing these tasks. In the paragraph beginning at col. 4, line 58 and ending at col. 5, line 9, Gloudeman discloses two interfaces “through which other systems may be coupled to the building automation system.” *Gloudeman*, col. 4, lines 58-61. The first interface 54 requires no conversions because the systems external to the building automation system already communicate in data protocols and formats that are compatible with the APIs of the building automation system. The second interface 56 includes the necessary protocol converters and data migration tools that enable third party systems, which do not

communicate in a manner that conforms to the first interface, to communicate with the building automation system. Both of these interfaces, however, couple the user interface applications of the information layer 50 (*Gloudeman*, col. 4, lines 25-44) to the building system interface 74, and not to the system database APIs 76 (FIG. 2).

The structure disclosed in *Gloudeman* is significantly different than the structure set forth in claim 1 for a number of reasons. For one, the user interface applications of the information layer are not disclosed as communicating with databases through instructions that conform to a common database access method. In fact, *Gloudeman* teaches away from that limitation as two interfaces must be provided. The provision of two interfaces demonstrates that no common database access method exists for the applications of the information layer. If a common database access method were used, only one interface would be needed to receive communications from the information layer. Additionally, *Gloudeman* does not disclose that either interface alone receives communications that conform to a common database access method. The standard interface 54 performs no conversion so the applications of the information layer that communicate through this interface provide database instructions that conform to the API of the database from which data is being sought. Without conversion functionality, the standard interface 54 cannot be a data provider as set out in claim 1. The third party interface also does not receive database instructions that conform to a common database access method because communications from each external system are converted *to* not *from* a common interface. The clear teaching of *Gloudeman* is that each third party system communicates in its protocol and data format and that the third party interface converts communications from the information layer to a *common* building system interface. That is, the third party interface of *Gloudeman* is the opposite of the claimed data provider, which converts from a common database access method to the database API coupled to the data provider. Consequently, the two interfaces between the information layer and the building system interface do not perform the conversions required by claim 1 and they cannot support the Examiner's assertion that *Gloudeman* teaches the data provider required by claim 1.

The building system interface also fails to support the Examiner's position that *Gloudeman* teaches a data provider as required by claim 1 because the building system interface of *Gloudeman* does not

teach the conversion of any data. Rather, the building interface system is described as a communication engine that routes data amongst the various layers of the system and that “communicates data from various building systems, including environmental, lighting, fire, security, power management, inventory, and maintenance.” (*Gloudeman*, col. 5, lines 41-47). Consequently, routing, and not conversion, is the function that Gloudeman teaches for the building system interface.

The Examiner also cannot rely upon the system database APIs 76 as being evidence of a data provider. Although the system database APIs access and populate the data stores, (*Gloudeman*, col. 5, lines 41-48), they do not convert database instructions conforming to a common database access method to a database API. As shown in FIG. 2 of Gloudeman, the system database APIs are only coupled to the real-time applications and the optimization applications. The use of the plural form (APIs) indicates that each data store presents its own API to the real-time applications and the optimization applications. These applications are shown in FIG. 2 as being coupled to the various APIs without a common converter or data provider. Thus, the application programs must be capable of communicating with each system database API with queries that conform to the API for the database and to receive responses from the data stores that conform to the database API, not a common database access method.

Finally, the control layer 52 is described as “supporting various control devices ... as well as applications defined for interaction with such devices.” *Gloudeman*, col. 4, lines 37-41. This description indicates that the layer 52 does not communicate database instructions or database responses. Instead, the layer communicates device instructions and device data between control applications and control devices. Thus, the control layer cannot operate as a data provider as required by claim 1.

For the reasons set forth above, Gloudeman cannot support the Examiner’s position that the prior art discloses a data provider as required by claim 1. Therefore, claim 1 is patentable over all references, either alone or in combination.

The burden of proof is on the Examiner, who must show that a cited reference teaches a limitation of a claim. Gloudeman does not show a data provider that converts instructions that conform to a common database access method to database queries that conform to a database API and that also converts database responses from a form conforming to a database API to the common database access method. Instead, the plain implication of the plural form of APIs indicates that any application program or interface communicating with the system database APIs must generate database queries that conform to the API for a particular database and be capable of receiving and processing responses that also conform to the API for that database. The two interfaces cited by the Examiner are not disclosed as being database interfaces and they are not described as performing the functions set forth in claim 1. The Examiner is only able to install such functionality in these two interfaces by importing Applicant's teachings into the Gloudeman reference. Such usage of Applicant's specification is impermissible hindsight and does not appropriately support the section 103 ground of rejection relied upon by the Examiner for the stated rejection of claim 1. For at least these reasons, claim 1 is allowable over all references of record, either alone or in combination.

The Section 103 Ground of Rejection Should Be Withdrawn Because Modification of Dellacoras To Include A Data Provider Is Unreasonable

The Examiner's proposed combination of Dellacoras and Gloudeman also fails because the Examiner has not put forth a credible reason for modifying Dellacoras to include a data provider as required by claim 1. As noted above, the proposed combination cannot modify Dellacoras with a data provider because Gloudeman does not teach a data provider that is configured to convert database instructions and database responses as required by claim 1. Additionally, Dellacoras fails to recognize a need to convert between a database common interface method and a database API. As noted by the Examiner, a database resource from the database 210 is made available to user activities 212, 214 through a flow dependency 220. *Dellacoras*, col. 17, lines 43-51. *Dellacoras* does not discuss any database API or any need for the flow dependency to convert communications between the user activities and the database 210. Therefore, one of ordinary skill in the art would not modify Dellacoras to include a data provider that performs the conversions required in claim 1. The opening discussion of databases in Dellacoras at col. 6, line 58 to col. 7, line 15, does not disclose any conversion between a common database access method and the API 36. Likewise, the

database access through prerequisite dependency 98, which is discussed at col. 10, lines 34-36, is also void of any discussion of a need to convert between a common database access method and a database API. Only a person attempting to arrive at Applicant's claimed invention would consider modifying Dellacoras to add a converting interface to the flow dependency for database communications between the database of Dellacoras and the user activities of the applications disclosed therein. Such efforts, however, do not properly support a section 103 ground of rejection and thus, claim 1 is allowable over all references of record.

The Remaining Claims

Claims 2-14

Claims 2-14 depend from claim 1 and, consequently, include the limitations discussed above that are not disclosed in either Dellacoras or Gloudeman. Thus, these two references also do not fail a proper foundation for the rejection of claim 4. Therefore, each of these claims is also patentable over all references of record, either alone or in combination.

Claim 15

Claim 15 requires the conversion of database instructions conforming to a common database access method and the conversion of database responses from a database API to a common database access method. Therefore, for reasons similar to those presented above, claim 15 is patentable over all references of record, either alone or in combination. Additionally, claim 15 specifies that the database instructions be in computer statements that implement control logic of application definition data. The database discussions in Dellacoras, which were identified above, do not disclose database instructions in reference to the user activities and, especially, do not disclose database instructions in computer statements that implement control logic of application definition data. Gloudeman also fails to disclose such database instructions as the generation of the control applications used in Gloudeman is not discussed. Consequently, neither Dellacoras nor Gloudeman disclose database instructions in computer statements that implement control logic of application definition data or the conversion of such instructions to database queries that conform to a database API. For at least these reasons, claim 15 is patentable over all references of record, either alone or in combination.

Claims 16-28

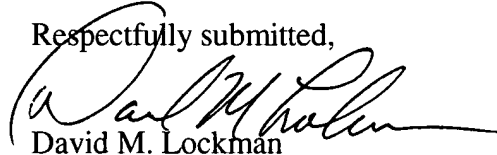
Claims 16-28 depend from claim 15 and, consequently, include the limitations discussed above that are not disclosed in either Dellacoras or Gloudeman. Therefore, each of these claims is also patentable over all references of record, either alone or in combination.

III. Conclusion

For all of the foregoing reasons, Applicant respectfully submits a patentable contribution to the art has been made. Favorable reconsideration and allowance of this application is therefore respectfully requested.

In the event Applicant has inadvertently overlooked the need for an extension of time or payment of an additional fee, Applicant conditionally petitions therefore, and authorizes any fee deficiency to be charged to deposit account 13-0014.

Respectfully submitted,



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